

**COMMONWEALTH OF VIRGINIA**  
**Department of Environmental Quality**  
**South Central Regional Office**

**STATEMENT OF LEGAL AND FACTUAL BASIS**

Knight-Celotex  
250 Knight-Celotex Way Danville, Virginia  
Permit No. SCRO30330

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Knight-Celotex has applied for a Title V Operating Permit for its Danville facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_ Date: \_\_\_\_\_

Air Permit Manager: \_\_\_\_\_ Date: \_\_\_\_\_

Regional Director: \_\_\_\_\_ Date: \_\_\_\_\_

## **FACILITY INFORMATION**

Permittee  
Knight-Celotex  
250 Knight-Celotex Way  
Danville, VA 24541

Facility  
Knight-Celotex  
250 Knight-Celotex Way

County-Plant Identification Number: 51-083-00032

## **SOURCE DESCRIPTION**

NAICS Code: 321219 - Establishments primarily engaged in manufacturing reconstituted wood sheets and boards.

The original source registration was received on August 4, 1972 for United States Gypsum Company. Primary operations include wood chip receiving and storage, wood chip refining and preparation, wood mat forming, a board kiln, a press, rough and finish trim saws, a tempering baking oven, a product coating operation, two natural gas/propane-fired boilers, one wood waste-fired boiler, one wood waste/natural gas/propane-fired boiler, and process fuel and chemical storage.

The facility is a Title V major source of CO, PM-10, VOCs, and HAPs. This source is located in an attainment area for all pollutants, and is a PSD major/potential major source. The facility was not been previously permitted under Minor NSR Permit, State Operating Permit, or PSD Permit. A Title V permit was issued to the source on August 11, 2000.

## **COMPLIANCE STATUS**

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

## EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The significant emissions units at this facility consist of those listed in Condition II.A. This condition contains a table listing information for significant emission units and any associated control devices.

## EMISSIONS INVENTORY

Emissions are summarized in the following tables.

Actual Emissions					
	<b>2004 Criteria Pollutant Emission in Tons/Year*</b>				
<b>Emission Unit</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>VOC</b>
BH4	0.70	1.43	0.07	0.0	0.04
BH5	0.21	0.44	0.03	0.0	0.01
BH6 & BH7	35.20	3.53	4.07	0.19	0.60
BM10 & BM11	2.83	2.78	11.04	0.02	7.93
PB1 thru PB8	0.49	0.35	9.19		25.83
FIN1 thru FIN3			2.03		
FIN5					0.0
2004 - Total	39.43	8.53	26.43	0.21	34.41
	<b>2003 Criteria Pollutant Emission in Tons/Year*</b>				
BH4	1.54	2.18	.14	.01	.10
BH5	0.28	0.41	0.02	0.0	0.02
BH6 & BH7	139.49	13.96	16.12	0.77	2.12
BM10 & BM11	12.51	13.21	32.92	0.08	23.39
PB1 thru PB8	1.42		25.79		73.97
FIN1 thru FIN3			5.89		
FIN5					0.24
2003 - Total	155.24	29.76	80.88	0.86	99.84

\* - Emissions taken from emissions inventory.

Facility Hazardous Air Pollutant Emissions

<b>Pollutant (Major HAPs only)</b>	<b>Hazardous Air Pollutant Emission in Tons/Yr</b>
Formaldehyde	73.1
Acetaldehyde	24.5
Toluene	2.0

\* - Emissions taken from application submitted by source.

**EMISSION UNIT APPLICABLE REQUIREMENTS - Two Wickes natural gas/propane boilers (BH4 & BH5)**

**Limitations**

These two boilers are subject to Chapter 40 of the Regulations and are not covered by any permits.

Condition III.A.1 - Limits the fuels for the 2 boilers to the fuels which they are currently designed to burn.

Conditions III.A.2 and A.3 – Limits emissions for particulate matter and SO<sub>2</sub> as well as opacity in accordance with Chapter 40 Article 8 for these 2 existing boilers.

PM = 2.87 lbs/hr each (per revised allocation 9/21/99)

SO<sub>2</sub> = 2.64\*(45.5) = 120.1 lbs/hr each

Condition III.A.4 - Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation in accordance with the boiler manufacturer's operating instructions.

**Monitoring**

Condition III.B - Periodic monitoring requirement to assure compliance with the opacity standard.

**Testing**

There are no testing requirements for these 2 boilers in this permit.

**Recordkeeping**

Condition III.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements for these 2 boilers in this permit.

**Reporting**

There are no reporting requirements for these 2 boilers in this permit.

**Streamlined Requirements**

None

**EMISSION UNIT APPLICABLE REQUIREMENTS - Wickes wood-fired boiler (BH6) and Bigelow wood/natural gas/propane boiler (BH7)****Limitations**

These two boilers are subject to Chapter 40 of the Regulations and are not covered by any permits.

Condition IV.A.1 - Particulate emissions are required to be controlled by the listed control equipment.

Conditions IV.A.2 and A.3 - Limits the fuels for the 2 boilers to the fuels which they are currently designed to burn.

Condition IV.A.4 – Limits emissions for particulate matter and SO<sub>2</sub> in accordance with Chapter 40 Article 8 for these 2 existing boilers.

PM = 25.83 lbs/hr each (per revised allocation 9/21/99)

SO<sub>2</sub> = 2.64\*(60) = 158.4 lbs/hr each

Condition IV.A.5 – Limits opacity in accordance with Chapter 40 Article 8 for the stack that these 2 existing boilers share.

Condition IV.A.6 - Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation in accordance with the boiler manufacturer's operating instructions.

**Monitoring**

Condition IV.B – The current process at the source does not require the use of these 2 boilers. However, the source wishes to maintain the option for using them at some point in the future. Potential particulate emissions from each of these boilers are greater than 100 tons/yr before controls, and controls are used to meet the emission requirements. Therefore, the boilers are subject to 40 CFR Part 64 - Compliance Assurance Monitoring. A Compliance Assurance Monitoring (CAM) Plan dated June 10, 2005 was submitted upon request. Periodic monitoring requirements are included to assure compliance with the opacity standard.

**Testing**

Condition IV.C – Sets out the stack testing requirements for these 2 boilers if the annual capacity factor exceeds 10 percent when burning wood.

**Recordkeeping**

Condition IV.D – Lists required records to be kept by the source to assure compliance with the Limitation, Monitoring, and Testing requirements for these 2 boilers in this permit.

**Reporting**

Condition IV.E – Requires reporting in accordance with the CAM Plan.

**Streamlined Requirements**

None

**EMISSION UNIT APPLICABLE REQUIREMENTS - Fiberboard Kiln Dryer with Natural Gas burners (BM10 & BM11)****Limitations**

The kiln dryer are subject to Chapter 40 of the Regulations and are not covered by any permits.

Condition V.A.1 - Limits the fuels for the kiln dryer to the fuels that the unit is currently designed to burn.

Condition V.A.2 - Limits emissions for particulate matter and SO<sub>2</sub> as well as opacity in accordance with Chapter 40 Article 4 for the kiln dryer.

$$PM = 4.10 * (43,200 / 2,000)^{0.67} = 32.1 \text{ lbs/hr}$$

$$SO_2 = 2.64 * (37 * 2) = 195.4 \text{ lbs/hr}$$

Condition V.A.3 – Limits opacity in accordance with Chapter 40 Article 1 for the kiln dryer.

**Monitoring**

Condition V.B - Periodic monitoring requirement to assure compliance with the opacity standard.

**Testing**

There are no testing requirements for the kiln dryer in this permit.

**Recordkeeping**

Condition V.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements of this permit.

**Reporting**

There are no reporting requirements for these 2 boilers in this permit.

**Streamlined Requirements**

None

**EMISSION UNIT APPLICABLE REQUIREMENTS - Fiberboard Pre-Dryer (PB1), Press (PB2), Coolers (PB3 & PB4), Press Unloader, (PB5) Tempering Line (PB6), Bake Oven (PB7), and Humidifier (PB8)****Limitations**

These units are subject to Chapter 40 of the Regulations and are not covered by any permits.

Condition VI.A.1 – Limits emissions for particulate matter in accordance with Chapter 40 Article 4 for these units.

$$PM=4.10*(43,200/2,000)^{0.67} = 32.1 \text{ lbs/hr each}$$

Condition VI.A.2 – Limits opacity in accordance with Chapter 40 Article 1 for these units.

**Monitoring**

Condition VI.B - Periodic monitoring requirement to assure compliance with the opacity standard.

**Testing**

There are no testing requirements for these units in this permit.

**Recordkeeping**

Condition VI.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements of this permit.

**Reporting**

There are no reporting requirements for these units in this permit.

**Streamlined Requirements**

None

**EMISSION UNIT APPLICABLE REQUIREMENTS - Double Trimmer Saw (FIN1)**

**Limitations**

This Trimmer Saw (FIN1) is subject to Chapter 40 of the Regulations and is not covered by any permits.

Condition VII.A.1 - Particulate emissions are required to be controlled by the listed control equipment.

Condition VII.A.2 – Limits emissions for particulate matter in accordance with Chapter 40 Article 17 for this trimmer saw.

PM = 0.05 grains per standard cubic feet of exhaust gas

Condition VII.A.3 – Limits opacity in accordance with Chapter 40 Article 1 for this trimmer saw.

**Monitoring**

Condition VII.B – Because potential particulate emissions from the trimmer saw dust system are greater than 100 tons/yr before controls, and controls are used to meet the emission requirements, the trimmer saw is subject to 40 CFR Part 64 - Compliance Assurance Monitoring. A Compliance Assurance Monitoring (CAM) Plan dated June 10, 2005 was submitted upon request. Periodic monitoring requirements are included to assure compliance with the opacity standard.

**Testing**

There are no testing requirements for this trimmer saw in this permit.

**Recordkeeping**

Condition VII.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements for this trimmer saw in this permit.

**Reporting**

Condition VII.D – Requires reporting in accordance with the CAM Plan.

**Streamlined Requirements**

None

**EMISSION UNIT APPLICABLE REQUIREMENTS - Woodwaste Collection Systems (FIN2 & FIN3)****Limitations**

These units are subject to Chapter 40 of the Regulations and are not covered by any permits.

Condition VIII.A.1 - Particulate emissions are required to be controlled by the listed control



equipment.

Condition VIII.A.2 - Limits emissions for particulate matter in accordance with Chapter 40 Article 17 for these 2 collection systems.

PM = 0.05 grains per standard cubic foot of exhaust gas each

Condition VIII.A.3 – Limits opacity in accordance with Chapter 40 Article 1 for these 2 collection systems.

### **Monitoring**

Condition VIII.B - Because potential particulate emissions from each of the woodwaste collection systems are greater than 100 tons/yr before controls, and controls are used to meet the emission requirements, the woodwaste collection systems are subject to 40 CFR Part 64 - Compliance Assurance Monitoring. A Compliance Assurance Monitoring (CAM) Plan dated June 10, 2005 was submitted upon request. Periodic monitoring requirements are included to assure compliance with the opacity standard.

### **Testing**

There are no testing requirements for these 2 collection systems in this permit.

### **Recordkeeping**

Condition VIII.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements for these 2 collection systems in this permit.

### **Reporting**

Condition VIII.D – Requires reporting in accordance with the CAM Plan.

### **Streamlined Requirements**

None

## **EMISSION UNIT APPLICABLE REQUIREMENTS - Specialty Sander (FIN4)**

### **Limitations**

This unit is subject to Chapter 40 of the Regulations and is not covered by any permits.

Condition IX.A.1 - Particulate emissions are required to be controlled by the listed control equipment.

Condition IX.A.2 - Limits emissions for particulate matter in accordance with Chapter 40 Article 17 for this specialty sander.

PM = 0.05 grains per standard cubic foot of exhaust gas

Condition IX.A.3 – Limits opacity in accordance with Chapter 40 Article 1 for this specialty sander.

**Monitoring**

Condition IX.B - Periodic monitoring requirement to assure compliance with the opacity standard.

**Testing**

There are no testing requirements for this specialty sander in this permit.

**Recordkeeping**

Condition IX.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements for this specialty sander in this permit.

**Reporting**

There are no reporting requirements for this specialty sander in this permit.

**Streamlined Requirements**

None

**EMISSION UNIT APPLICABLE REQUIREMENTS - Burdette Gas Oven (FIN5) for coating operation**

**Limitations**

This unit is subject to Chapter 40 of the Regulations and is not covered by any permits.

Condition X.A.1 - Limits emissions for particulate matter in accordance with Chapter 40 Article 4 for this oven.

$$PM=4.10*(15,000/2,000)^{0.67} = 15.8 \text{ lbs/hr}$$

Condition X.A.2 - Limits opacity in accordance with Chapter 40 Article 1 for this oven.

**Monitoring**

Condition X.B - Periodic monitoring requirement to assure compliance with the opacity standard.

**Testing**

There are no testing requirements for this oven in this permit.

**Recordkeeping**

Condition X.C - Lists required records to be kept by the source to assure compliance with the Limitation and Monitoring requirements for this oven in this permit.

**Reporting**

There are no reporting requirements for this oven in this permit.

**Streamlined Requirements**

None

**FACILITY WIDE CONDITIONS FOR HAZARDOUS AIR POLLUTANT EMISSIONS**

As a major source of HAPs, the source is subject to 40 CFR Part 63 (National Emissions Standards for Hazardous Air Pollutants for Source Categories), generally referred to as MACTs. The source shall comply with the requirements the applicable MACTs, including, but not limited to, the applicable requirements for emission standards, operational standards, work practice standards, monitoring, testing, recordkeeping, and reporting. Two MACT rules have been promulgated that apply to this source. The applicable MACTs for this facility are:

- National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boiler and Process Heaters (40 CFR Part 63 Subpart DDDDD) – applicable to industrial, commercial, or institutional boilers or process heaters located at, or that are part of, a major source of HAP. Compliance Date: September 13, 2007.
- National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR Part 63 Subpart DDDD) - applicable to plywood and composite wood products (PCWP) manufacturing facilities. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams. Compliance Date: October 1, 2007.

**GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

## **STATE ONLY APPLICABLE REQUIREMENTS**

There are no State Only Applicable Requirements in this permit

## **FUTURE APPLICABLE REQUIREMENTS**

None

## **INAPPLICABLE REQUIREMENTS**

In the Title V permit issued August 11, 2000 there was a 15,000 gallon hydraulic oil tank (FIN8) listed as being subject to NSPS Subpart Kb. On October 15, 2003, the subpart was revised. The revision changed the minimum tank size applicable to the subpart to 75 m<sup>3</sup> (19,813 gallons). Therefore, the hydraulic oil tank is no longer subject to Subpart Kb.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

## **COMPLIANCE PLAN**

There is not a Compliance Plan for this facility.

## **INSIGNIFICANT EMISSION UNITS**

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units at this facility consist of those listed in Condition II.B. This

condition contains a table listing information for insignificant emission units identified in the application as being insignificant under 9 VAC 5-80-720.

### **CONFIDENTIAL INFORMATION**

There was no confidential information noted in the application.

### **PUBLIC PARTICIPATION**

The proposed permit was placed on public notice in the Danville Register and Bee on June 26, 2005. No comments were received from the public.